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(54) Color cathode-ray tube

(57) The present invention provides a color cathode-ray tube that can attenuate vibration of an entire shadow mask positively with a simple structure. The color cathode-ray tube comprises a frame-shaped mask frame 11 and a shadow mask 10 in which many apertures 12 are formed in a flat plate, the shadow mask 10 being stretched and fixed in the mask frame 11 in a condition in which a tension force is applied in one direction. The amplitude in the end portions of the shadow mask 10 is not less than a certain amount relative to the amplitude in the center portion of the shadow mask 10, in a resonance of the shadow mask 10 caused by a vibration propagated to the color cathode-ray tube. Furthermore, by providing vibration attenuators 13 at the end portions of the shadow mask 10, vibrations at the end portions of the shadow mask 10 are attenuated as the side surfaces of the shadow mask 10 slide on the vibration attenuators 13. Thus, vibration of the entire shadow mask 10 can be extinguished positively.

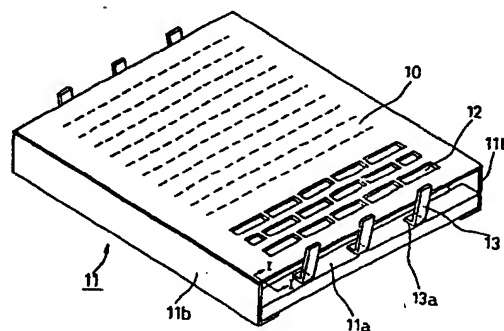


FIG. 9



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EUROPEAN SEARCH REPORT

Application Number
EP 99 11 7030

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The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 23 February 2000	Examiner COLVIN, G
<p>CATEGORY OF CITED DOCUMENTS</p> <p>X: particularly relevant if taken alone Y: particularly relevant if combined with another document of the same category A: technological background O: non-written disclosure P: intermediate document</p> <p>T: theory or principle underlying the invention E: earlier patent document, but published on, or after the filing date D: document cited in the application L: document cited for other reasons</p> <p>&: member of the same patent family, corresponding document</p>			



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Application Number
EP 99 11 7030

DOCUMENTS CONSIDERED TO BE RELEVANT			
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A	GB 2 258 941 A (SAMSUNG ELECTRONIC DEVICES) 24 February 1993 (1993-02-24) * figure 2 *	9	
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The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 23 February 2000	Examiner COLVIN, G
<p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons</p> <p>& : member of the same patent family, corresponding document</p>			



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CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing more than ten claims.

- ☐ Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims and for those claims for which claims fees have been paid, namely claim(s):
- ☐ No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims.

LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

see sheet B

- ☒ All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.
- ☐ As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.
- ☐ Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:
- ☐ None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:



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**LACK OF UNITY OF INVENTION
SHEET B**

Application Number
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The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

1. Claims: 1-6

Vibration damping by control of mask stresses

2. Claims: 7-14

Vibration damping by elastic contacting body

3. Claims: 15-24

Vibration damping by non-attached attenuator

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 99 11 7030

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
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23-02-2000

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